AMENDMENTS TO THE CLAIMS:

The following list replaces all prior versions and listings of claims in the Application.

Listing of Claims:

1. (currently amended) A system for estimating ~~an~~ a signal-to-noise ratio (SNR) - related parameter comprising:

first logic for determining a count of the number of received symbols in a predetermined number of received symbols that fall within one or more predetermined sample collection areas; and

second logic for associating the count with a value of the SNR – related parameter.

2. (original) The system of claim 1 wherein the symbols are quadrature symbols having in-phase (I) and quadrature (Q) components, the one or more collection areas are defined in relation to an I-Q plane, and the first logic determines if a received symbol falls into the one or more collection areas from the I and Q components of the symbol.

3. (currently amended) The system of claim 1 wherein the SNR – related parameter is E_S/N_0, where E_S is the received energy/symbol, and N_O is the noise power spectral density.

4. (original) The system of claim 3 wherein the second logic associates the count with a value of E_S/N_0 expressed in dB.

5. (original) The system of claim 1 wherein the second logic associates the count with a value of the SNR - related parameter using one or more lookup tables.

6. (currently amended) ~~The~~ A system ~~of claim 5~~ for estimating an SNR - related parameter comprising:

first logic for determining a count of the number of received symbols in a predetermined number of received symbols that fall within one or more predetermined sample collection areas; and

second logic for associating the count with a value of the SNR – related parameter;

wherein the second logic associates the count with a value of the SNR - related parameter using one or more lookup tables; and

wherein the second logic associates the count with a value of the SNR - related parameter using first and second lookup tables, wherein at least the first lookup table depends on a symbol constellation and the size of the one or more collection areas.

7. (original) The system of claim 6 wherein the symbol constellation is an 8-PSK symbol constellation.

8. (original) The system of claim 6 wherein the symbol constellation is a QPSK symbol constellation.

9. (currently amended) The system of claim ~~5~~ 6 wherein each entry in a first table is the probability of a received symbol falling into the one or more collection areas at a given value of the SNR - related parameter, which comprises a corresponding entry in a second table.

10. (original) The system of claim 9 wherein the second logic correlates the count with an estimate of the SNR - related parameter by (1) translating entries in the first table to count values through multiplication by the predetermined number of symbols; (2) determining which entries in the first table, after translation into count values, bound the count; (3) determining the corresponding entries in the second table; and (4) interpolating between the corresponding entries in the second table to arrive at the estimate of the SNR - related parameter.

11. (currently amended) The system of claim ~~5~~ 6 wherein each entry in a first table is a count of the number of received symbols expected to fall into the one or more collection areas at a given value of the SNR - related parameter, which comprises a corresponding entry in a second table.

12. (original) The system of claim 11 wherein the second logic associates the count with an estimate of the SNR - related parameter by (1) determining which entries in the first table bound the count; (2) determining the corresponding entries in the second table; and (3) interpolating between the corresponding entries in the second table to arrive at the estimate of the SNR - related parameter.

13. (currently amended) A system for scaling a symbol with a scaling factor derived from an estimate of ~~an~~ a signal-to-noise ratio (SNR) - related parameter comprising:

first logic for determining a count of the number of symbols in a predetermined number of symbols which fall within one or more predetermined collection areas;

second logic for correlating the count with a value of the SNR - related parameter; and

third logic for scaling a symbol with a scaling factor derived from the value of the SNR – related parameter.

14. (original) The system of claim 13 further comprising fourth logic for quantizing the scaled symbol.

15. (currently amended) The system of claim 13 wherein the value of the SNR - related parameter is E_S/N_0 expressed in dB, where E_S is the received energy/symbol, and N_0 is the noise power spectral density, and where the scaling factor is the value of E_S/N_0 converted into linear terms.

16. (original) The system of claim 14 wherein the fourth logic quantizes the scaled symbol using a uniform quantization delta.

17. (currently amended) The system of claim 16 wherein the quantization delta is optimized around a predetermined E_S/N_0 value, where E_S is the received energy/symbol, and N_0 is the noise power spectral density.

18. (currently amended) A system for estimating ~~an~~ a signal-to-noise ratio (SNR) - related parameter comprising:

first means for determining a count of the number of symbols in a predetermined number of symbols which fall within one or more predetermined collection areas; and

second means for associating the count with a value of the SNR - related parameter.

19. (currently amended) A system for scaling a received symbol with a scaling factor derived from an estimate of ~~an~~ a signal-to-noise ratio (SNR) - related parameter comprising:

first means for determining a count of the number of symbols in a predetermined number of symbols which fall within one or more predetermined collection areas;

second means for associating the count with a value of the SNR - related parameter; and

third means for scaling a symbol with a scaling factor derived from the value of the SNR - related parameter.

20. (original) The system of claim 19 further comprising fourth means for quantizing the scaled symbol.

21. (original) The system of any of claims 1, 13, 18, or 19 in a second system which includes a decoder.

22. (original) The second system of claim 21 wherein the decoder comprises a log-MAP decoder.

23. (original) The second system of claim 22 implemented as one or more integrated circuit chips.

24. (currently amended) A method for estimating ~~an~~ a signal-to-noise ratio (SNR) - related parameter comprising:

determining a count of the number of symbols in a predetermined number of received symbols which fall within one or more predetermined collection areas; and

correlating the count with a value of the SNR - related parameter.

25. (original) The method of claim 24 wherein the symbols are quadrature symbols having in-phase (I) and quadrature (Q) components, the one or more collection areas are defined in relation to an I-Q plane, and the determining step comprises determining if a symbol falls into the one or more collection areas from the I and Q components of the symbol.

26. (currently amended) The method of claim 24 wherein the SNR - related parameter is E_S/N_0, where E_S is the received energy/symbol, and N_O is the noise power spectral density.

27. (original) The method of claim 26 wherein the correlating step comprises associating the count with a value of E_s/N_0 expressed in dB.

28. (currently amended) The method of claim 24 wherein the ~~associating~~ correlating step comprises associating the count with a value of the SNR – related parameter using one or more lookup tables.

29. (currently amended) ~~The~~ A method ~~of claim 28~~ for estimating an SNR - related parameter comprising:

determining a count of the number of symbols in a predetermined number of received symbols which fall within one or more predetermined collection areas;

correlating the count with a value of the SNR - related parameter by associating the count with a value of the SNR – related parameter using one or more lookup tables; and

wherein the associating step comprises associating the count with a value of the SNR - related parameter using first and second lookup tables, wherein at least the first lookup table depends on a symbol constellation and the size of the one or more collection areas.

30. (original) The method of claim 29 wherein the symbol constellation is an 8-PSK symbol constellation.

31. (original) The method of claim 29 wherein the symbol constellation is a QPSK symbol constellation.

32. (original) The method of claim 28 wherein each entry in a first table is the probability of a received symbol falling into the one or more collection areas at a given value of the SNR - related parameter, which comprises a corresponding entry in a second table.

33. (original) The method of claim 32 wherein the correlating step comprises associating the count with an estimate of the SNR - related parameter by (1) translating entries in the first table to count values through multiplication by the predetermined number of symbols; (2) determining which entries in the first table, after translation into count values, bound the count; (3) determining the corresponding entries in the second table; and (4) interpolating between the corresponding entries in the second table to arrive at the estimate of the SNR parameter.

34. (original) The method of claim 28 wherein each entry in a first table is a count of the number of received symbols expected to fall into the one or more collection areas at a given value of the SNR - related parameter, which comprises a corresponding entry in a second table.

35. (original) The method of claim 34 wherein the correlating step comprises associating the count with an estimate of the SNR - related parameter by (1) determining which entries in the first table bound the count; (2) determining the corresponding entries in the second table; and (3) interpolating between the corresponding entries in the second table to arrive at the estimate of the SNR parameter.

36. (currently amended) A method for scaling a symbol with a scaling factor derived from an estimate of ~~an~~ a signal-to-noise ratio (SNR) parameter comprising:

determining a count of the number of symbols in a predetermined number of symbols which fall within one or more predetermined collection areas;

associating the count with a value of the SNR parameter; and

scaling a symbol with a scaling factor derived from the value of the SNR parameter.

37. (original) The method of claim 36 further comprising quantizing the scaled symbol.

38. (currently amended) The method of claim 36 wherein the value of the SNR - related parameter is E_S/N_0 expressed in dB, where E_S is the received energy/symbol, and N_O is the noise power spectral density, and where the scaling factor is the value of E_S/N_0 converted into linear terms.

39. (original) The method of claim 37 further comprising quantizing the scaled symbol using a uniform quantization delta.

40. (currently amended) The method of claim 39 wherein the quantization delta is optimized around a predetermined E_S/N_0 value, where E_S is the received energy/symbol, and N_O is the noise power spectral density.

41. (currently amended) A method for estimating ~~an~~ a signal-to-noise ratio (SNR) - related parameter comprising:

a step for determining a count of the number of symbols in a predetermined number of symbols which fall within one or more predetermined collection areas; and

a step for associating the count with a value of the SNR - related parameter.

42. (currently amended) A method for scaling a symbol with a scaling factor derived from an estimate of ~~an~~ a signal-to-noise ratio (SNR) - related parameter comprising:

a step for determining a count of the number of symbols in a predetermined number of symbols which fall within one or more predetermined collection areas;

a step for associating the count with a value of the SNR - related parameter; and

a step for scaling a symbol with a scaling factor derived from the value of the SNR - related parameter.

43. (original) The method of claim 42 further comprising a step for quantizing the scaled symbol.

44. (original) A processor readable medium on which is stored a series of instructions tangibly embodying any of the methods of claims 24, 36, 41 or 42.

45. (original) A system comprising the processor readable medium of claim 44 and a processor configured to access and execute the series of instructions stored on the medium.

46. (original) A system tangibly embodying any of the methods of claims 24, 36, 41, or 42, comprising a state machine, a memory, and one or more arithmetic elements.

47. (original) The system of claim 46 wherein the state machine provides control, one or more lookup tables are stored in the memory, and the one or more arithmetic elements perform arithmetic operations for scaling or interpolation.

48. (currently amended) The system of claim 47 wherein the state machine ~~is comprised of~~ comprises one or more application-specific integrated circuits (ASICs).

49. (original) The system of claim 48 wherein the one or more ASICs are synthesized logic.